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Claims:

1. A battery powered system comprising:
a display;
a battery;
a first controller operatively coupled to the battery for receiving signals from the battery relating to at least one battery parameter, and for causing the supply of one of a plurality of different charging currents to the battery based on the signal received; and
a second controller operatively coupled to the display and the first controller, the second controller for receiving signals from the first controller related to charging of the battery, and for causing the display of information related to the charging of the battery on the display.
2. The battery powered system of claim 1 further comprising a device housing and a battery pack, and wherein the battery is located in the battery pack and the first and second ~~CONTROLLERS~~ controller are located in the device housing.
3. The battery powered system of claim 2 wherein the battery is detachably coupled to the first controller.
4. The battery powered system of claim 2 wherein the first and second controllers comprise first and second microprocessors.
5. The battery powered system of claim 4 wherein the second microprocessor comprises a central processing unit.

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6. The battery powered system of claim 1 wherein the second controller comprises a microprocessor and the first controller comprises at least one of discrete circuitry and an integrated circuit.

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7. The battery powered system of claim 8 wherein the microprocessor comprises at least one of discrete circuitry and an integrated circuit.

central processing unit

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8. The battery powered system of claim 2 wherein the second controller comprises a microprocessor and the first controller comprises at least one of discrete circuitry and an integrated circuit.

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9. The battery powered system of claim 8 wherein the second microprocessor comprises a central processing unit.

10. The battery powered system of claim 1 wherein the second controller receives signals from the first controller related to the at least one battery parameter, and uses the signals received to determine the one of the plurality different charging currents used to charge the battery.

11. The battery powered system of claim 10 wherein the second controller comprises a microprocessor, and wherein the microprocessor selects the one of the plurality of different charging currents and transmits control signals to the first controller indicating the charging current selected.

12. The battery powered system of claim 1 wherein the first controller uses the signals received from the battery to determine the one of the plurality of different charging currents used to charge the battery.

13. The battery powered system of claim 12 wherein the first controller is a microprocessor.

14. The battery powered system of claim 1 further comprising a charger detachably coupled to the battery for supplying the plurality of different charging currents.

15. The battery powered system of claim 14 wherein the first controller is located in the charger.

16. The battery powered system of claim 14 wherein the charger supplies a trickle charge to the battery to maintain a full charge for as long as the charger is coupled to the battery.

17. The battery powered system of claim 14 further comprising a device housing and battery pack, and wherein the second controller is located in the device housing and the battery is located in the battery pack.

18. The battery powered system of claim 17 wherein the charger comprises a docking station, and the first controller becomes operatively coupled to a supply of power upon insertion of at least one of the device housing and the battery pack into the docking station.

19. The battery powered system of claim 14 further comprising a device housing, and wherein the first controller is located in the device housing.

20. The battery powered system of claim 14 further comprising a battery pack, and wherein the first controller is located in the battery pack.

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21. The battery powered system of claim 1 wherein the at least one battery parameter comprises temperature.

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22. The battery powered system of claim ²²21 wherein the first controller disables the supply of charging current to the battery when the temperature exceeds a predetermined threshold value.

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23. The battery powered system of claim 1 wherein the information displayed is an indication that the battery is being charged.

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24. The battery powered system of claim ²⁴23 wherein the information is displayed when the battery is operatively coupled to a charger.

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25. The battery powered system of claim 14 wherein the charger is coupled to the battery via a plug and socket arrangement.

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26. A battery powered system comprising:
a battery pack having a battery;
a portable utilization device having a first controller detachably coupled to the battery and a second controller operatively coupled to the first controller, the second controller for receiving signals based upon at least one battery parameter and for selecting one of a plurality of different charging rates based on the signals received, the first controller being responsive to control signals from the second controller for causing the battery to be charged at the selected charging rate.

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27. The battery powered system of claim ²⁸26 wherein the first and second controllers comprise first and second microprocessors.

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The battery powered system of claim 26 wherein the first controller comprises at least one of discrete circuitry and an integrated circuit, and the second controller comprises a microprocessor.

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The battery powered system of claim 28 wherein the microprocessor comprises a central processing unit.

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The battery powered system of claim 27 wherein the second microprocessor comprises a central processing unit.

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The battery powered system of claim 26 wherein the second controller comprises a central processing unit.

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The battery powered system of claim 26 further comprising a charger detachably coupled to the battery pack for supply charging current to the battery.

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The battery powered system of claim 32 wherein the charger supplies a trickle charge to the battery to maintain a full charge for as long as the charger is coupled to the battery pack.

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The battery powered system of claim 32 wherein the charger comprises a docking station, and wherein the charger becomes coupled to the battery pack upon insertion of at least the battery pack into the charger.

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The battery powered system of claim 34 wherein both the battery pack and the device are inserted into the charger.

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The battery powered system of claim 26 wherein the at least one battery parameter comprises temperature.

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The battery powered system of claim 36 wherein the first controller disables the supply of charging current to the battery when the temperature exceeds a predetermined threshold value.

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38. The battery powered system of claim 32 wherein the charger is coupled to the battery pack via a plug and socket arrangement.

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The battery powered system of claim 26 wherein the device has a display operatively coupled to the second controller, and wherein the second controller causes the display of information related to the charging of the battery on the display.

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The battery powered system of claim 39 wherein the information is displayed when the battery pack is operatively coupled to a charger.

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The battery powered system of claim 39 wherein the information displayed is an indication that the battery is being charged.

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The battery powered system of claim 26 wherein the signals based upon the at least one battery parameter are received by the second controller from the first controller.

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A battery powered system comprising:
a battery;
a first controller operatively coupled to the battery;
a second controller operatively coupled to the first controller, the second controller for receiving signals based upon at least one battery parameter and for selecting one

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of a plurality of a different charging rates based on the signals received, the first controller being responsive to control signals from the second controller for causing the battery to be charged at the selected charging rate.

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44. The battery powered system of claim 45 wherein the battery is detachably coupled to the first controller.

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45. The battery powered system of claim 45 wherein the first and second controllers comprise first and second microprocessors.

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46. The battery powered system of claim 45 wherein the second microprocessor comprises a central processing unit.

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47. The battery powered system of claim 45 wherein the second controller comprises a microprocessor and the first controller comprises at least one of discrete circuitry and an integrated circuit.

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48. The battery powered system of claim 47 wherein the microprocessor comprises a central processing unit.

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49. The battery powered system of claim 45 wherein the signals based upon the at least one battery parameter are received by the second controller from the first controller.

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50. The battery powered system of claim 45 further comprising a charger detachably coupled to the battery for supplying charging current to the battery.

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51. The battery powered system of claim 50 wherein the ^{second} controller is located in the charger.

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52. The battery powered system of claim ⁵²~~50~~ wherein the charger supplies a trickle charge to the battery to maintain a full charge for as long as the charger is coupled to the battery.

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53. The battery powered system of claim 1 wherein the at least one battery parameter comprises temperature.

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54. The battery powered system of claim ²⁶~~53~~ wherein the first controller disables the supply of charging current to the battery when the temperature exceeds a predetermined threshold value.

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55. The battery powered system of claim ⁵²~~50~~ wherein the charger is coupled to the battery via one of a docking station and a plug and socket arrangement.